

To: The Commission.

While the Commission's interest in extending the benefits of Internet is commendable, I believe a decision to employ the existing electrical power distribution system infrastructure for Broadband Over Power Lines (BPL) would be erroneous and ill-conceived. It will assuredly result in increased interference for other spectrum users (government as well as private and commercial) and possibly even to the BPL users themselves. The resulting conflicts and demands for protection and for accommodation will surely add immensely to the FCC's workloads.

Interference to large numbers of government and public health and safety services will surely result if BPL is permitted to expand in scope, and particularly if allowable BPL signal levels are increased beyond current experimental levels. At a time when National Security and Homeland Defense are paramount issues in both political and public discourse, risks of interference to the radio communications key to successful accomplishment of these services should be deemed completely unacceptable. The benefits to the general public of yet one more gateway to the Internet, beyond those already provided by the several wireless, cable, satellite, and both dialup and highspeed telephone lines, are unlikely to outweigh the risks to public safety and security. It is readily apparent that these vital services do not generally have access to funds necessary to relocate spectrum to avoid BPL interference. Nor is it apparent that taxpayers should be burdened to pay for such relocations so that the BPL businesses may turn a profit.

The power distribution system is at best imperfect and in some cases nearly archaic. Whereas telephone and cable services are reasonably balanced or well-shielded for short wavelength signals (due to good engineering practices and to regulations) the power lines are not shielded or balanced with respect to short wavelength signals. Further, power lines are routinely subject to corrosion and deterioration due to weather, etc. A corroded or loose power line connection point can (and usually does) rectify signals, creating a multitude of harmonic and intermodulated frequencies well-removed from those intended to pass through or beyond the connection. Unwanted radio frequency energy so generated radiates easily from the power lines because their design was never balanced or shielded for short wavelengths. The potential for widespread and difficult to diagnose radio interference is evident.

Beyond the power lines themselves, there exists the wide variety and innumerable quantity of consumer devices attached to the power lines in homes, shops and offices. These were not been designed and manufactured with consideration for power lines with broadband signals on them. The kinds of interference problems they will produce is mind-boggling. And there are still the effects to consider that broadband signals will have on the devices themselves, and the resulting barrages of complaints to manufacturers, power companies and the FCC.

The FCC has issued hundreds of thousands of licenses to services in the HF spectrum which are served on a "primary" basis. This essentially assures those services will be protected from interference by other services. The FCC has stated that it will protect these services. However, in all probability the radio frequency cacophony that wideband RF over power lines can produce will overwhelm FCC resources, forcing it to abandon licensees to their own solutions. The credibility of the FCC as a competent regulatory agency, and the careers of FCC personnel, then will be at risk.

Finally, BPL is a technology in search of an application. It attempts to force the power lines into a use which is not necessary and for which they are ill-suited. If there were not already many means of accessing Internet and other wideband services considered for BPL, it might make some sense to consider employing the power infrastructure as an emergency form of connectivity. But we do not have such a communications emergency in America.

Please consider requiring services to employ the technologies that are appropriate, and in good engineering practice, to the services they render. Power distribution should remain the domain of the power companies and their equipment. Broadband distribution services should be allocated to those with the proper facilities.

Respectfully Submitted,

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